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1918

UNITED STATES DEPARTMENT OF AGRICULTURE  
OFFICE OF PUBLIC ROADS AND RURAL ENGINEERING  
Washington, D. C.

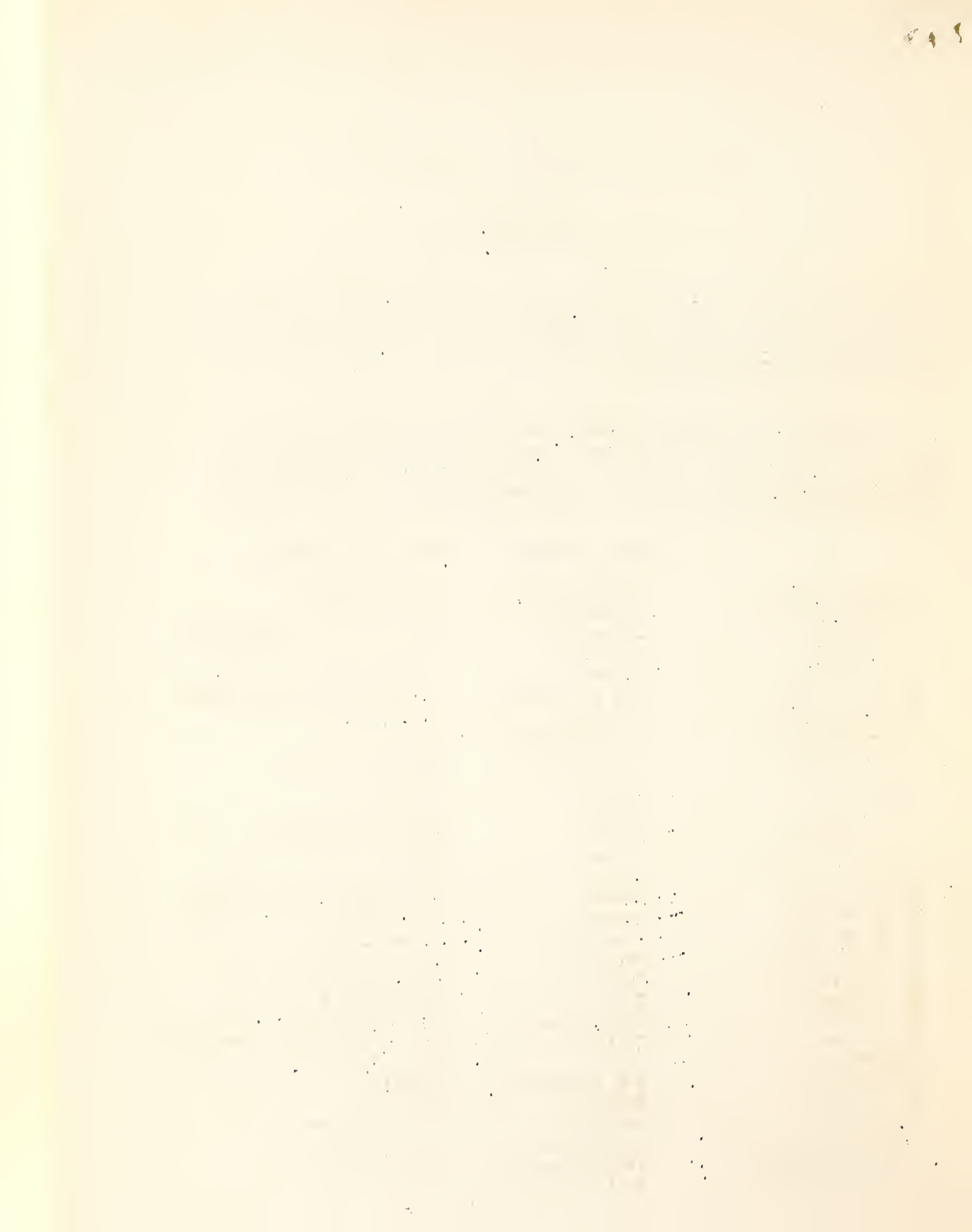
FIELD LETTER NO. 35.  
January 21, 1918.

Logan Waller Page, Director.

P. St. J. Wilson, Chief Engineer; J. E. Pennybacker, Chief of Management; Samuel Fortier, Chief of Irrigation Investigations; S. H. McCrory, Chief of Drainage Investigations; E. B. McCormick, Chief of Rural Engineering; Prevost Hubbard, Chief of Tests.

Before a month will have passed, there will be flying above the entrance to the Office of Public Roads and Rural Engineering a service flag, 5 by 8 feet, with 48 stars, in honor of the men of the Office who have entered the service. Almost every branch of the service is represented in the list which follows. Here are the men:

	<u>Military Title</u>	<u>Branch of Service.</u>
Wallace Ashby,	1st Lieutenant	Engineers Corps.
F. Russell Lyons,	Lieutenant	E. O. R. C.
W. B. Booth,	Lieutenant	U.S.R. Corps of Engineers.
Q. C. Ayres,	Lieutenant	U. S. R. Corps of Engineers.
O. N. Powell,	Captain	Engineers Corps
Dan S. Helmeick,	1st Lieutenant	U.S.R. Corps of Engineers.
Harris E. Petree	Private	Aviation Corps.
I. G. Kohlmeier,	Dental Surgeon	U. S. Navy.
A. L. Hooper,	Lieutenant	Engineers Corps.
P. A. Rideout,	Sergeant	110th Engineers Corps.
R. E. Toms,	Captain	Artillery.
W. A. McCalla,	Major	Battalion of Road Engineers.
Wm. H. Rhodes,	Captain	25th Engineers Corps.
Wells A. Hutchins,	Private	---
J. H. Skeggs,	Major	In Charge Road Battalion.
Geo. R. Boyd,	Captain	U.S.R. Corps of Engineers.
J. H. Haswell,	Captain	U.S.R. Corps of Engineers.
J. C. Stirton,	Lieutenant	E. O. R. C.
C. E. Proudley,	Corporal	Coast Artillery.
H. H. Barrows,	Captain	302nd Engineers, U.S.R.
C. F. Bessee,	Private	361st Infantry.
Guy L. Smith,	Lieutenant	E. R. O. T. C.
L. A. Jones,	Captain	U.S.R. 514 Service Battalion.
Carl Rohwer,	---	R. O. T. C.
Albert L. Lane,	1st Lieutenant	Infantry.
C. A. Miller,	Corporal	Artillery.
I. D. Lucal,	Private	Hospital Corps.
Chas. H. Moorefield,	Lieutenant	Naval Reserve.
H. H. MacPherson,	1st Lieutenant	Engineers Corps.
W. G. Franks,	Captain	Signal Corps.



	<u>Military Title</u>	<u>Branch of Service.</u>
W. B. Gregory,	Major	U.S.E. Corps Engineers
John H. Chapman,	Clerk	Signal Corps
D. A. From,	Cornet	23rd Engineers Corps
E. P. Sleight,	1st Lieutenant	Signal Corps
W. M. Joffrey,	1st Lieutenant	Engineers Corps
W. H. Waugh,	Captain	Engineers Corps
D. O. Wolfe,	Captain	Aviation Corps
C. H. Sweetser,	Captain	Unassigned
S. L. Taylor,	Lieutenant	E. R. O. T. C.
M. G. Sloan,	1st Lieutenant	E. R. O. T. C.
O. G. Baxter,	Captain	E. R. O. T. C.
F. G. Eason,	Captain	E. R. O. T. C.
T. H. McCarthy,	----	E. R. O. T. C.
L. L. Balbo	Captain	E. R. O. T. C.
Edw. Puckoff,	----	347th Engineers
B. H. Harrison,	Private	Engineers Corps
J. B. Boyd,	Private	Ordnance Corps
D. L. MacPeath,	1st Lieutenant	Engineers Corps

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FEDERAL AID  
Administration.

Post Road Projects.

Twenty-nine new project statements were submitted in December, as follows: Arkansas Nos. 9, 10, and 11; California Nos. 7, 8, and 9; Florida No. 3; Illinois No. 1; Iowa Nos. 4, 11, and 12; Mississippi No. 4; Nevada No. 5; New Mexico No. 12; Oregon No. 5; Tennessee No. 1; Texas Nos. 7, 8, and 20; Utah Nos. 2, 4, 5, 6, 7 and 8; Virginia Nos. 5 and 6, and Wyoming Nos. 5 and 7.

The Secretary approved 55 project statements in December, the largest number yet approved in any one month. They are as follows: Alabama Nos. 6 and 26; Arkansas Nos. 8, 10, and 11; California Nos. 7 and 8; Colorado No. 5; Illinois No. 1; Iowa Nos. 2, 7, 8, and 9; Kentucky No. 2; Louisiana No. 14; Maine No. 3; Michigan Nos 7 and 10; Mississippi Nos. 6, 9, 10, 12, and 13; Nebraska No. 2; Nevada Nos. 1, 2, 3, and 4; New Mexico Nos. 1, 2, 3, 4, 5, 6, 9, 10, 11, and 12; North Carolina No. 16; Oregon No. 4; Pennsylvania Nos. 5, 6, and 7; Virginia No. 5; Texas Nos. 1, 2, 3, 4, 5, 6, 7, 8 and 20; Wisconsin No. 1, and Wyoming No. 5.



National Forest Roads.

In December there were received preliminary reports on six National Forest projects, aggregating 177 miles in length, the estimated cost of construction being \$571,461.87, and a report on necessary improvements to be made on the North Fork of Flathead River, Montana, 27.6 miles in length, the estimated cost being \$20,965.00.

District Engineer Whittaker reported the receipt of requests for preliminary investigations of 3 projects in Nevada, aggregating 57 miles, the estimated cost of such work being \$310.00

District News.

Applications were received by District Engineer Sweetser from Solano and Colusa counties, California, for the assignment of an engineer to make a county study and from Pima County, Arizona, for the assignment of an engineer to take charge of the construction of the Sabina Canyon road.

The season's operations on the Salmon River Road in California closed November 25.

District No. 2 headquarters have been transferred from Berkeley to San Francisco, California, in the Mills Building.

H. H. Macpherson, Supt. of Road Construction, has been commissioned First Lieutenant in the Engineers Reserve Corps and is at present assigned to the 20th Engineers at American University, District of Columbia.

W. M. Jeffrey, Junior Highway Engineer, has been commissioned First Lieutenant and left Denver, December 31, to enter the Officers training camp at Camp Lee, Virginia.

George D. Whittle, Highway Bridge Engineer, advised with the State Highway Department of Louisiana regarding the preparation of revised estimates and plans for several projects.

H. C. Wells, Highway Engineer was on leave during the latter half of the month.

C. E. Rayner, Senior Highway Engineer, temporarily assigned to assist in District No. 8, returned to the main office December 22.

Throughout the month C. T. Harrison, Supt. Road Construction, advised with the State Highway Department of Texas.

W. F. Bracks, Senior Highway Engineer, was assigned to District No. 7 effective December 15, 1917, and will be located in Frankfort, Kentucky, where he will advise with the Department of Public Roads there when not engaged in Federal aid work.







Guy H. Miller, District Engineer of District No. 10, conferred with the State Highway Departments of New York, Delaware, Massachusetts, and Rhode Island.

C. H. Chilvers, Draftsman, reported to District Engineer Miller on December 17, for temporary assignment and left on the 26th for Denver for further assignment with District No. 3.

### CONSTRUCTION AND MAINTENANCE.

#### Special Inspection and Advice.

Vernon M. Peirce attended a meeting of the Committee on Concrete Roads and Pavements of the American Concrete Institute on December 13, at New York. He also made an inspection of the Chapawamsic Road upon final completion of the repair work under contract.

H. C. Wells, Highway Engineer, spent three days in Arkansas advising regarding roads in that State.

W. L. Spoon, S. H. E., after finishing his work at the cantonment, Columbia, S. C., was sent to make an inspection of the Aiken County, South Carolina post road.

J. D. Fauntleroy, 6th District Engineer, in company with the State Highway Engineer of Oklahoma made an inspection of the roads in Tulsa County, with a view to improving them with the proceeds of a \$1,750,000 bond issue. He also made a trip to Austin, Texas, to give advice to the Texas State Highway Department.

#### Superintendence of County Roads.

F. A. Davis, J. H. E., spent the entire month in superintending the construction of roads in Albemarle County, Virginia.

#### Post Roads.

H. S. Parry, J. H. E., was engaged the entire month on the construction of the Dubuque County, Iowa, post road, and hopes to finish and render final report of work done by the latter part of February.

#### Object Lesson Roads.

S. L. Taylor spent 12 days in supervising the construction of a top soil road in Henry County, Virginia, after which time he took leave until the first of the year, when he was ordered to report to the Engineer Officers' training camp, at Camp Lee, Virginia.



Assisting State Highway Department.

B. TE. Gray, Engineer Economist, assisted the State Highway Department of West Virginia, and C. F. Lewis, Irrigation Manager, spent the month in advising with the North Carolina State Highway Commission. C. T. Harrison rendered efficient services to the State Highway Department of Texas.

Field Experiments.

J. H. Dodge, S. P. C., completed his assignment on the Champawansic Road in Prince William County, Virginia, and went on leave. He will remain in Washington until assigned to other work.

J. H. Eldridge, S. R. C., made daily trips, whenever possible, over the experimental roads near Washington.

Mr. West, Patrolman on the Mt. Vernon and Gun Spring Road resigned December 21, and a new patrolman will be appointed in the early spring.

Personal.

Captain R. E. Toms, former Senior Highway Engineer in this Office, called here December 4, en route to his home in Maryland, while on a short furlough; he has been assigned to Camp Traverse in Texas.

Messrs. Copeland and Linton, Bridge Engineers, have reported for duty.

ECONOMICS.

Economic Highway Survey.

Arrangements were made to conduct a study of road conditions in the vicinity of Camp Lee, Virginia, with the view of preparing an economic and military map of that section. Messrs. W. E. Rosengarten, W. H. Barton, Jr., J. J. Tobin, and R. F. Eastham were assigned for this purpose. The State Highway Department of Virginia will cooperate in the work.

Photographic Laboratory.

The photographic laboratory during December handled 468 slides (of which 100 were colored), 1543 prints, 102 bromide enlargements, and 379 negatives. There were sent out during the month 147 slides, 535 prints, and 34 bromides.

Personnel.

R. F. Eastham completed his work at Camp Upton, Yaphank, L. I., and returned to this Office preparatory to starting his assignment on the economic and military highway survey work.





J. J. Tobin completed his assignment at the Ayer, Massachusetts, cantonment and returned to Washington preparatory to taking up work on the economic and military highway survey.

L. T. Walker has been appointed assistant to Mr. Hillers in the photographic work and reported for duty on December 10.

L. H. Schlegel has been appointed to help Mr. Hall in topographic mapping and reported for duty on December 16.

#### Program for 1919 Road Construction.

With a view to working out a definite selective program for 1918 road construction, the following letter was sent to all highway departments, and copies to manufacturing concerns and various organizations. Replies were unanimously favorable to dealing with the road work this year in a national sense and with a view to the elimination of unnecessary construction:

"Road construction throughout the United States has been seriously hampered as you know by reason of excessive costs, scarcity of labor, and inadequate transportation facilities. This situation would be serious even in normal times, but in this crisis when the public roads must in addition to their normal traffic be depended upon to relieve the tremendous strain to which the railways are subjected, it becomes a matter of vital importance that some means be found at least to deal with next season's work so as to assure better results than are possible under our present system.

"During the past few weeks I have discussed the subject with men who are identified with road work in various capacities. As an outcome of these discussions I am taking the liberty of suggesting for your consideration a policy for next year's road work which seeks to remedy some of the weaknesses of the present system. Briefly this policy proposes: (1) The selective consideration of all of next year's construction jobs in all of the States and the preparation of a program of road work throughout the nation, in which program each construction job would be listed in the order of its economic importance to the particular territory in which it is located and to the nation as a whole. This arrangement would permit of the elimination of such work as may be omitted with least injury to our economic welfare; (2) a coordination of this selective process with the railway and water transportation facilities with a view to insuring an adequate number of cars and vessels of suitable types, with proper distribution to transport materials for the construction of the approved jobs; (3) a coordination with the materials industries with a view to insuring supplies of materials in adequate amount, distribution, and deliveries to permit the construction program to be carried out; (4) the adoption by each State of such measures with reference to construction contracts as would best meet the needs and requirements of State.

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"May I not ask that you advise me as to your views on the subject and that you favor me with any suggestions either as to policy or working plan, and also to what extent your department may be able to cooperate in a movement of this character.

"Awaiting reply at your earliest convenience, I am,

Very truly yours,

Enclosure;  
Franked envelope.

(Signed) L. W. PAGE.  
Director"

TESTS AND RESEARCH.  
Administration.

J. T. Pauls, assistant highway engineer, was transferred to this Division for work on Concrete Investigations

Routine Tests and Analyses.

In December 20 samples were examined in the chemical laboratories; 46 samples of rock, sand and gravel were examined in the physical laboratories; and 44 samples were examined and classified in the microscopic laboratory.

Research upon the Properties of Dust  
Presentives and Road Binders.

The investigation upon the thickness of bituminous films has been continued, but further than this there has been no opportunity for continuing work on account of the reduced laboratory force.

Nonbituminous Road Material Investigations.

Additional tests have been made with the standard brick rattler to determine the effect of omitting the shot charge, which confirm results previously reported and make it highly desirable that this test be revised. Tests are also being run on the hardness of individual brick which had been subjected to the impact test with the object of determining what relation, if any, exists between the hardness and toughness of brick. Comparison of the results between rattler tests and impact tests shows that a fairly definite relation exists, the toughness, in general, increasing with the resistance to wear.

Concrete Investigations.

Work has been continued on the testing of the reinforced concrete slab subjected to concentrated loads placed centrally and eccentrically.



*[The text in this section is extremely faint and illegible. It appears to be a list or a series of entries, possibly names and dates, but the characters are too light to transcribe accurately.]*

A few preliminary tests have been made to investigate methods for producing a rapid hardening concrete.

#### Soil Pressure Investigations.

In the soil pressure work friction tests are being made on material used in the backfill against the Sixteenth Street bridge abutment. Various percentages of moisture are being used and it is found that there is a slight increase in the coefficient of friction when the sample contains moisture up to 16 per cent. It is expected that the coefficient of friction will be decreased with a somewhat higher percentage of moisture. The angle of friction averages about 37 degrees.

In the hydraulic fill tests work has been temporarily suspended on account of the cold weather.

A paper has been prepared giving the results of the tests thus far made, describing the apparatus, and suggesting a method for using the soil pressure measuring apparatus in hydraulic fill dams during their construction. It is believed that by the use of this apparatus the construction of such dams will be rendered much safer than in the past.

#### IRRIGATION. Administration.

M. R. Lewis, Assistant Irrigation Engineer, will continue the investigations in Idaho during the absence of W. G. Sloan, D. E., now in training camp.

F. G. Harden, Irrigation Engineer, was transferred January 1, to the extension workers, North and West, of the States Relations Service.

P. E. Fuller, Irrigation Engineer, has been called to Detroit to attend to the business affairs of a relative who has entered upon war duties, and expects to be absent from his field for several weeks. Until Mr. Fuller's return J. C. Marr, Assistant Irrigation Engineer, will be in charge of the work in Arizona.

O. V. Adams has been appointed Drainage Engineer and detailed temporarily to assist in the Colorado investigations.

In addition to the members of the permanent staff noted in this and previous letters, who have entered military service, the following temporary employees have joined various branches of the army: H. T. McQuistan, J. L. Jensen, R. A. Allen, and H. S. Rhodes, assistants to F. L. Bixby, in the Nevada investigations; J. B. Brown, Assistant to Frank Adams in Sacramento Valley, California, and Bruce McBride, Assistant to L. M. Winsor, in Utah.



To supplement the examination for Junior Irrigation Engineer held January 9, recommendation has been made that the Civil Service Commission receive the papers of candidates for appointment as Irrigation Engineers in an undated, nonassembled examination. If the examination is offered, appointments will be made from the register at salaries from \$1,500 to \$2,000 per annum.

### Utilization of Water.

Frank Adams, Irrigation Manager, was reported in Washington for a conference regarding a proposed cooperation with the State Water Commission of California looking to the extensive development of Kings River Valley. This would involve surveys to determine the irrigable area of the valley, the use now being made of the streams, and economies which might be effected not only in the use of water but in revision of existing systems. A large number of water registers, released from other fields, has already been diverted to the Kings River work.

L. M. Winsor has submitted the following tabular report showing the results so far accomplished in the work in Utah having to do with the reorganization and revision of irrigation systems in that state:

Project	Nature of Work	Acreage	
		Original	Final
Cedar City (Coal Creek)	Combination of 7 companies.	12,000	30,000
Enterprise (Washington County)	Reconstruction of system		
	Complete revision of system	5,000	12,000
Beaver (Beaver County)	Combination of 10 companies		
	Complete reorganization of system	10,000	25,000
Manderfield (Indian Creek) near Beaver	Combination of 2 companies effected. System rebuilt and completed	5,000	12,000
Oak City (Millard Co.)	Reconstruction of system contemplated. Preliminary work done.	2,000	3,500
Filmore (Millard Co.)	Complete reorganization of 2 systems. Only preliminary work done	7,000	15,000
Cox Bros. (San Pete Co.) near Manti	Complete reconstruction of system nearing completion	200	500
Mt. Pleasant (San Pete Co.)	Recovery of underground water and exchange for gravity water. Preliminary work done	500	1,000





(Table Cont'd).

Project	Nature of Work	Acreage	
		Original	Final
Santoquin (Utah Co.)	New diversion system. Completed	1,200	1,200
Bountiful (Davis Co.)	Complete reorganization, under way	10,000	15,000
Little Cottonwood (Salt Lake Co.)	Recovery of ground water pumped to higher ground. System completed	100	400
Plain City (Weber Co.)	Redistribution of water and recovery of water by pumping	3,000	4,000
Perry (Boxelder Co.)	Combination of 2 companies. Under way	300	400
Paradise South Fields	Complete reconstruction of dis- tributing system. Completed and working	1,800	2,000
Total		58,100	122,000

#### Appliances and Equipment.

E. J. Hoff reports completion of ratings on a new current meter devised by him which have not been equaled by any other meters tested by him. Mr. Hoff was able to rate the new meter consistently at velocities below 0.2 per cent as well as at 8 feet per second.

#### Customs, Regulations, and Laws.

R. A. Hart is in the Washington office working with other members of the force on the drafting of a new drainage district law for Utah, to be submitted to a state commission with which the Office is cooperating. L. M. Winsor is also in Washington at work on the draft of an irrigation law for the same state.

Complying with a request from the Council of National Defense for reference to state legislation of merit in connection with the war situation, the Irrigation Division called attention to the enactment of the California legislature which permits individuals and mutual water companies to sell water to others without thereby becoming public utilities and without working a dedication of water so delivered to public use. The Council has in mind the further reference of this or other desirable legislation to the consideration of state governments which might find benefit in similar enactments.

As a result of the conference called by the Director of the Census to consider plans for a fourth census of irrigation to be a part of the Federal census of 1920, which was mentioned in last month's field letter, a single schedule was devised to include all statistics collected at the last





census, replacing the several schedules then used. An additional set of queries of importance, dealing with the extent of waterlogged and alkali lands was included. In addition to Dr. Fortier, R. P. Teele, and P. A. Ewing, who represented this division, about a dozen other representatives were at the meeting, among them Dr. F. H. Newell, former director of the Reclamation Service, W. C. Grover, of the U. S. Geological Survey, W. M. Reed, of the U. S. Indian Service, and several members of the Reclamation Service. Before the close of the conference S. H. McCrory and B. D. Marsden were called into attendance to discuss the advisability of recommending a census of drainage. The conference recommended consideration of this, but did not attempt to devise a scheme for taking it.

#### Drainage of Irrigated Land.

B. A. Hart reports the following statistics showing areas concerned in plans for and installations of drainage systems in the various irrigation states, in which the Office has had a hand during the past year:

Arizona	10,000	acres
Colorado	21,000	"
Idaho	45,000	"
Nevada	40,000	"
New Mexico	90,000	"
Oregon	5,000	"
Texas	5,000	"
Utah	100,000	"
Washington	10,000	"
Wyoming	45,000	"
Total	371,000	"

#### DRAINAGE INVESTIGATIONS Administration.

O. G. Baxter, S. D. E., and F. G. Eason, S. D. E., have entered the Engineer Reserve Officers' Training Camp at Camp Lee, Petersburg, Virginia.

Edw. C. Thomas, D. E., has been assigned to the Little Rock, Arkansas office.

Lieutenant W. B. Booth, has arrived in Europe. We have word indirectly that Lieutenant D. S. Hellick is doing engineering work in the front line trenches.

Captains Boyd and Haswell have been ordered to prepare for extended field service, Captain Jones has been transferred to the 514th Service Battalion Camp Gordon, Georgia.

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Construction, Operation and Maintenance.

Reports Received:

Results from Improving Gills Creek, South Carolina, by  
Kay B. Knudsen, J. D. E.

Erosion in North Forked Deer River Channel, Tennessee, by  
C. E. Ramser, S. D. E.

Progress Report in Operation of Pumping Plants, upper  
Mississippi Valley, - by L. A. Jones, S. D. E., and  
C. Kirschner, J. D. E.

Run-off.

Report Received:

Kutter's Coefficient N for Channels in West Tennessee, by  
C. E. Ramser, S. D. E.

Irrigation in Humid Regions.

Report Transmitted:

Deerfield Grove Company's Property, St. Lucie County, Florida, by  
F. W. Stanley, I. E.

Louisiana Canal Company Irrigation System, Louisiana, (A review of  
plans submitted) - by F. W. Stanley, I. E.

Sewage Irrigation for Borough of Vineland, New Jersey, by  
F. W. Stanley, I. E.

Sewage Irrigation for State Home for Women, Vineland, New Jersey, by  
F. W. Stanley, I. E.

Farm Drainage.

J. V. Phillips, S. D. E., has been authorized to give a series of  
lectures on drainage at the Short Course in January by the State Agricultural  
College at Athens, Georgia.

Edward C. Thomas, D. E., and F. O. Bartel, J. D. E., are assisting  
H. M. Lynde, S. B. E., in North Carolina.

From December 12 to January 12, inclusive, 30 farm drainage reports  
have been submitted by the field engineers, and 40 have been transmitted to  
the interested landowners.

# THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

IN WHICH ARE CONTAINED THE

CAUSES, THE PROGRESS, AND THE

CONSEQUENCES OF THE

WAR

IN WHICH HE WAS ENGAGED

WITH HIS PARLIAMENTS

AND WITH HIS ENEMIES

IN THE YEAR OF OUR LORD

1625

AND OF THE REIGN

OF KING CHARLES THE FIRST

IN THE YEAR OF OUR LORD

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OF KING CHARLES THE FIRST

IN THE YEAR OF OUR LORD

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Overflowed Lands.

Reports Transmitted:

Marydel Drainage District (Engineer's and Viewers Report), Caroline County, Maryland, by F. F. Shafer, S. D. E.

Faulkner Drainage District (preliminary), Caroline to Queen Annes counties, Maryland, by F. F. Shafer, S. D. E.

Dutchman and Little Dutchman Creeks, Iredell County, North Carolina, by H. M. Lynde, S. D. E.

Swamp Lands.

A brief report upon Drainage Progress in South Carolina, was prepared by F. G. Eason, S. D. E., at the request of the State Commissioner of Agriculture, and has been transmitted for publication by that official.

RURAL ENGINEERING  
Administration.

E. B. McCormick attended the Eleventh Annual Meeting of the American Society of Agricultural Engineers in Chicago, December 27-29, 1917.

M. A. E. Kelley has been appointed Barn Architect as a result of the Civil Service examination held for that position last September. He was formerly employed by the Iouden Machinery Company, Fairfield, Iowa.

Charles Kruegl, Architectural Draftsman, has been granted indefinite leave owing to illness in his family.

Farm Structures.

The drawing for a general barn, a feed barn, and a concrete farm sterilizer, which were prepared before the organization of the Division, have been revised preparatory to retracing on the Division's standard sheets.

A bill of materials for a farm house, drawings for which were prepared some time ago, were practically completed ready for multigraphing.

Drawings for a cattle breeding crate were prepared at the request of the Dairy Division.





Mechanical Problems.

Elmer Johnson made a trip of 12 days to Tallulah, Louisiana, where experiments are being made in an effort to overcome the boll-weevil. He secured data and consulted with the investigators of the Bureau of Entomology and is now devising suitable apparatus for use in dusting cotton plants with an insecticide.

This Division was represented in a conference of manufacturers in the Secretary's Office at which the agricultural machinery situation was discussed.

Memoranda were prepared for the Secretary's Office on the prices of raw material used in the manufacture of wire fencing and of the finished product and on the "reasonableness of prices of farm machinery."

L. L. Beebe prepared and submitted several bulletins on the care and repair of farm machines as part of the series of bulletins on Farm Machinery to be published.

Information Series No. 21 - Housing - has been compiled for use with correspondence.

Correspondence and problems relating to the following subjects were handled,

Farm Structures,  
Chemical Closets,  
Locating Water Supplies,  
Self Feeders for Hogs,  
Fireproofing,  
Water Supply,

Sewage Disposal,  
Fencing,  
House Heating,  
Ice House Construction,  
Farm Electric Plants,  
Power Development of Streams.



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